

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063372 A2

- (51) International Patent Classification⁷: **B01J**
- (21) International Application Number:
PCT/EP2004/014509
- (22) International Filing Date:
20 December 2004 (20.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
103 61 003.0 23 December 2003 (23.12.2003) DE
- (71) Applicant (for all designated States except US): **HTE AKTIENGESELLSCHAFT THE HIGH THROUGH-PUT EXPERIMENTATION COMPANY** [DE/DE]; Kurpfalzring 104, 69123 Heidelberg (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HAAS, Alfred** [DE/DE]; Richard-Wagner-Strasse 27, 69214 Eppelheim (DE). **STREHLAU, Wolfgang** [DE/DE]; Bergstrasse 30b, 69221 Dossenheim (DE). **BRENNER, Armin** [DE/DE]; wieblinger ST5, 55288 Spiesheim (DE). **KÖCHEL, Oliver** [DE/DE]; Hintergasse 1, 67308 Bubenheim (DE). **FRIESS, Markus** [DE/DE]; Haupstr. 250, 67473 Lindenberg (DE). **ZECH, Torsten** [DE/DE]; Obere Seegasse 42, 69124 Heidelberg (DE).
- (54) Title: DEVICE AND METHOD FOR PRESSURE AND FLOW CONTROL IN PARALLEL REACTORS
- (57) Abstract: The present invention relates to a method and a device for the parallel study of chemical reactions in at least two spatially separated reaction spaces. In particular, the invention is suitable for reactions which are not constant volume reactions and/or for reactions in which fluid flows through at least two spatially separated reaction spaces are intended to be controlled together for all the reaction spaces, or for related subsets of them, in the most straightforward way possible. According to one embodiment, the device according to the invention for the parallel study of chemical reactions comprises at least the following components: (a) at least two spatially separated reaction spaces; (b) on the reaction space input side, at least one common educt feed for the reaction on the reaction space output side, at least one convection per reaction space to at least one holding gas feed common to all the reaction spaces, or subsets of them; (e) on the reaction space output side, and downstream of the connection to the holding gas feed according to (d) in the product flow direction, at least one restrictor per reaction space.
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2005/063372 A2